

THE MINERAL INDUSTRY OF BANGLADESH

By Chin S. Kuo

Bangladesh is one of the poorest and most densely populated countries in the world but has large potential natural gas reserves and small reserves of coal and oil. The gross domestic product (GDP) grew by an estimated 5.4% in 2003. Per capita GDP was only \$368 (International Monetary Fund, 2003§¹). The country financed its large trade deficit through foreign aid and remittances from the many Bangladeshi workers abroad. The garment industry accounted for three-quarters of the country's export earnings. Exports of natural gas could provide a major revenue source for Bangladesh if sufficient reserves were proven and developed. The development of the country's energy sector was hindered by natural disasters and inadequate infrastructure. Bangladesh was attempting to attract foreign investment in electricity, infrastructure, and natural gas (Alexander's Gas & Oil Connections, 2003§).

Bangladesh planned to privatize four state-owned petroleum marketing and distribution companies through international bidding. The companies were Eastern Lubricants Blenders, Meghna Petroleum, Padma Oil, and Standard Asiatic Oil Co. All these profit-making companies, which were 50% Government-owned on average, were subsidiaries of the state-owned Bangladesh Petroleum Corp. (World Refining, 2003).

Bangladesh could earn \$600 million per year from exports of 300 billion cubic meters of natural gas through a pipeline to India during a 25-year period. Its current recoverable reserves were estimated to be 750 billion to 900 billion cubic meters. Domestic opposition to natural gas exports to India, however, continued to grow, and the lack of other export opportunities forced ChevronTexaco Corp. of the United States to leave Bangladesh. The prospect of other foreign companies following suit could threaten to slow oil and gas exploration (Far Eastern Economic Review, 2004).

Lafarge Surma Cement Ltd., which was a joint venture of Lafarge S.A. of France and Cementos Molins, S.A. of Spain, awarded Larsen & Toubro Ltd. of India a \$103.4 million contract to build a 1.2-million-metric-ton-per-year (Mt/yr) cement plant in Bangladesh. F.L. Smidth & Co. of Denmark would supply technology for the plant. The plant would be located at Chhatak near Sylhet and was expected to be commissioned by October 2005. Limestone for the production of cement would be supplied from the Indian State of Meghalaya (Larsen & Toubro Ltd., 2003§).

The Sangu offshore gas pipeline underwent repair work in February that affected gas supply to Kafco, Inc. As a result, Kafco shut down its ammonia/urea units and used the downtime to carry out minor repair work at the plant. The repair work to the gas pipeline was completed within 3 weeks (Fertilizer Week, 2003). The Kafco granular plant was shut down owing to technical problems for 2 weeks in August.

The Ministry of Energy and Mineral Resources has overall responsibility for the country's energy policy and investment. Natural gas provided 67% of the country's commercial energy, and oil and limited amounts of coal and hydropower accounted for the remaining 33%. Bangladesh began its first significant coal production in April with the opening of the Barapukuria underground mine in the Dinjapur area of the Indian State of West Bengal. The mine would produce 1 Mt/yr of coal for electricity generation and was being developed by the state-owned Bangladesh Oil, Gas & Mineral Corp. (Petrobangla). The Barapukuria coal basin was estimated to contain 70 million metric tons of recoverable coal. Another possible coal mining project at Khalashpir was under consideration (Mining Journal, 2003).

The country's natural gas production was mainly from the Chatak Field. The Government revised estimates of proven natural gas reserves in Bangladesh to 509 billion cubic meters. In addition, there were undiscovered reserves estimated to be 908 billion cubic meters. Bangladesh could become a major gas producer. The country could use its natural gas to power vehicles and to produce electricity, fertilizers, and petrochemicals (Alexander's Gas & Oil Connections, 2003§).

Petrobangla had approximately 20 natural gas fields nationwide, one-half of which were active. The main fields included Bibiyana, Habiganj, Jalalabad, Kailashtilla, Rashidpur, Shahbazpur, and Titas. In addition, the Sangu offshore field in block 16 of the Bay of Bengal has produced natural gas since 1998; it was developed and run by Cairn Energy plc, Halliburton, and Shell Bangladesh Exploration and Development. Unocal Corp., through its wholly owned subsidiary Unocal Bangladesh Ltd., would begin development of the Moulavi Bazar Field in block 14 for deliveries of 2.83 million cubic meters per day to be used in the domestic market beginning in 2004 (Alexander's Gas & Oil Connections, 2003§).

Cairn Energy concluded the acquisition of the Royal Dutch/Shell Group's interest in the Sangu Field at yearend. The deal was worth \$50 million in cash on top of royalty payments of about \$25 million. With the addition of Royal Dutch/Shell's assets, Cairn Energy's average production of oil would be more than 30,000 barrels per day (bbl/d) (Rigzone, 2003§).

Chevron International Bangladesh, which held a 60% interest and operatorship in block 9 onshore, was sold to Niko Resources Ltd. of Canada. The other participants in block 9 were Tullow Bangladesh Ltd. (30%), and Bangladesh Petroleum Exploration & Production Co. Ltd. (10%) (Petroleum Economist, 2003b).

Bangladesh has small proven oil reserves, and Petrobangla was the sole player in the oil and gas sector. Foreign oil companies were active in exploration under production-sharing contracts in partnership with Petrobangla. Petrobangla served as the sole purchaser of oil and gas. Offshore oil exploration has been largely unsuccessful (Alexander's Gas & Oil Connections, 2003§).

¹ References that include a section mark (§) are found in the Internet References Cited section.

The Government cancelled the production-sharing contract on block 11 that was awarded to Tullow Oil plc and Petronas Carigali in 2000. The two companies failed to gain approval or reach an understanding on substantive issues within the stipulated time. The block was handed over to Petrobangla in 2003 (Petroleum Economist, 2003a).

The country had a 33,000-bbl/d oil refinery at Chittagong. In January, the Government granted approval for price increases on retail sales of petroleum products by Bangladesh Petroleum Corp. (Alexander's Gas & Oil Connections, 2003§).

References Cited

- Far Eastern Economic Review, 2004, Economic monitor: Far Eastern Economic Review, v. 167, no. 6, February 12, p. 44.
Fertilizer Week, 2003, Midweek briefing: Fertilizer Week, February 19, p. 3.
Mining Journal, 2003, First underground coal mine for Bangladesh: Mining Journal, v. 341, no. 8745, July 18, p. 48.
Petroleum Economist, 2003a, News in brief: Petroleum Economist, v. 70, no. 7, July, p. 46.
Petroleum Economist, 2003b, News in brief: Petroleum Economist, v. 70, no. 10, October, p. 46.
World Refining, 2003, Bangladesh plans privatization: World Refining, v. 13, no. 8, October, p. 28.

Internet References Cited

- Alexander's Gas & Oil Connections, 2003 (June 26), Country analysis: Bangladesh, accessed June 27, 2003, at URL <http://www.gasandoil.com/goc/news/nts32650.htm>.
International Monetary Fund, 2003 (September), World economic outlook database, accessed May 18, 2004, at URL <http://www.imf.org/external/pubs/ft/weo/2003/02/data/index.htm>.
Larsen & Toubro Ltd., 2003 (June 9), L&T awarded \$103-million cement plant order from Lafarge, accessed November 20, 2003, at URL <http://www.larsentoubro.com/news/upload/cyber-rt/103cement.htm>.
Rigzone, 2003 (September 1), Cairn Energy to conclude sale of Bangladesh assets by year-end, accessed September 2, 2003, at URL http://www.rigzone.com/news/article.asp?a_id=8184.

Major Sources of Information

- Bangladesh Oil, Gas & Mineral Corp.
122-124 Motijheel Commercial Area
Dhaka, Bangladesh
Telephone: 880 2 814936
Bangladesh Petroleum Corp.
GPO Box 2003
Dhaka, Bangladesh
Telephone: 880 2 235717
Geological Survey of Bangladesh
153 Pioneer Road
Dhaka, Bangladesh
Telephone: 880 2 406201
Ministry of Energy and Mineral Resources
Dhaka, Bangladesh
Telephone: 880 2 404051

Major Publications

- Bangladesh Bureau of Statistics, Dhaka:
Monthly Statistical Bulletin of Bangladesh.
Statistical Yearbook of Bangladesh.

TABLE 1
BANGLADESH: ESTIMATED PRODUCTION OF MINERAL COMMODITIES¹

(Metric tons unless otherwise specified)

Commodity ²	1999	2000	2001	2002	2003
Cement, hydraulic ³	2,085,000 ^{r, 4}	3,580,000 ^{r, 4}	5,005,000 ^{r, 4}	5,000,000 ^r	5,000,000
Clays, kaolin ³	7,700	7,900	8,000	8,100	8,200
Gas, natural, marketed ^{3, 5} million cubic meters	6,400	6,500	7,000	7,200	7,300
Iron and steel, metal: ³					
Steel, crude (ingot only)	36,000	35,000	30,000	30,000	25,000
Steel products	90,000	90,000	80,000	80,000	70,000
Nitrogen, N content of urea, ammonia, ammonium sulfate	1,240,100 ⁴	1,254,800 ⁴	1,273,000 ⁴	1,288,500 ⁴	1,388,700 ⁴
Petroleum:					
Crude thousand 42-gallon barrels	1,400	1,500	1,550	1,600	1,800
Refinery products do.	8,600	8,700	8,800	8,900	9,000
Salt, marine ³	350,000	350,000	350,000	350,000	350,000
Stone, limestone ³	27,000	28,000	30,000	32,000	34,000

^rRevised.

¹Estimated data are rounded to no more than three significant digits. Table includes data available through May 11, 2004.

²In addition to the commodities listed, crude construction materials, such as sand and gravel and other varieties of stone, presumably are produced, but available information is inadequate to make reliable estimates of output levels.

³Data are for years ending June 30 of that stated.

⁴Reported figure.

⁵Gross production is not reported; the quantity vented, flared, or reinjected is believed to be negligible.